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## The American Borderland Cities: Instant Urbanism along the Pan-American Highway

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### Abstract

*This study investigates the placement of fast-growth borderland urban agglomeration ruled by informal economies in the Americas which are situated alongside the main transport infrastructure of the Pan-American Highway<sup>1</sup> that serves as a 'grand linear urban lab'. The corridor Pan-American Highway constitutes a 'magnet', a catalyst for empowerment of both existing urban economies that co-exist regionally in different scales and envisioning future urban developments and configurations, which are being established in edge-cities along the Pan-American Highway.*

*This 'instant' process of urbanisation has upgraded various informal urban economies to adequate standards of production, consumption and exchange. In terms of regional development, one of the direct impacts of constructing the Panamericana (from Alaska to Patagonia) has been the expansion of formal and informal economic and trade corridors along the main infrastructure network, which is rapidly shaping the structure of border cities such as Detroit (US) – Windsor (Canada); El Paso (US) – Ciudad Juárez (Mexico) or Tacna (Peru) – Arica (Chile).*

*This research reflects on spatial concepts and principles of informal metapolisation<sup>2</sup> applied in two border cities: Tacna (Peru) – Arica (Chile) and El Paso (US) – Ciudad Juárez (Mexico). Method involves observation and fieldwork of informal retail and housing. Both process and outcomes are documented through methods of comparison, analysis and concept generation. The novelty of this study does not lie in neither a taxonomic mapping of informal border cities in emerging economies nor a mere catalogue of archi-types but rather in the conceptualisation and structuration of informal spatial schemes in intermediate landscapes along a common infrastructure.*

*This type of 'instant urbanity' constructs new urban patterns –transitory, intermittent or spontaneous ones- which flee from any conventional spatial planning: What is the functional, morphological or environmental impact of these temporal activities in existing urban and transport systems? How do they mutate, resist or perish?*

### Introduction

American nations are currently facing an important challenge in the fields of urban design and planning: the management of informal intermediate landscapes triggered by the increased mobility and unprecedented urban pressure. Standard planning cannot guarantee the environmental efficiency and quality of these new urban systems and their productive spaces. These new landscapes, categorised by their size, morphology and use, question the conventional notion of the modern city, as well as our common urban practices.

Nowadays American cities are experiencing a new phase of modernisation towards urban-based economies. Due to the rapid externalisation of production and services, capital's flows, the acceleration of cycle of production and new transport and communication systems; informalised economies are transforming cities and regions in restructured dynamic spaces that show the complexity of informalised spatial

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<sup>1</sup> So-called *Panamericana* in Spanish, is the longest system of roads on Earth with about 32,700 km. Titanic route with numerous geographical, environmental and urban contrasts, it has captured the imagination (and hostility) of visionary planners, engineers and environmentalists for many decades. It represents a systematic attempt of linking and organising cities and regions in the Americas, through formal and informal dynamics of transportation, economic development and urbanisation's processes.

<sup>2</sup> The *Metapolis* is constituted as a polarized system of interconnected global metropolises thanks to the proliferation of high-speed means of transport. The consequences of this acceleration are profound: the appearance of the so-called 'tunnel effect' among nodes means the end of the phenomenon of transversality that throughout history has served as a basis for the 'natural' organization of the territory. 'Metapolisation' is double process of metropolisation and formation of new types of urban territories called metapolis', Ascher, F. *New Principles of Urbanism* (2004), Madrid, Alianza Editorial, p.56

appropriations along main transport corridors. For instance, the new economic development of Latin American cities along the pacific coast depends on the improvement of accessibility, meaning large and complex networks of transport and communication and diversified services. It contributes to the restructuring of informal areas in neighbour cities through efficient transport and communicational networks between them.

Informal economies constitute a dynamic urban process, which includes many aspects of economic and social urban theories. By its intermittent nature, its spatial manifestations change frequently, sometimes hourly, daily or seasonally. The Instant Urbanism offers '*informal intermediate landscapes*', which are not consistent, functional and environmentally coherent areas but asymmetric territories. This phenomenon no longer responds to neither local urban policies nor administrative boundaries, but to intermittent transformations of functional, morphological or environmental means.

Is this type of '*Instant Urbanity*' a key factor in the development of cities in the Americas? What is the functional, morphological or environmental impact of these temporal activities in existing urban and transport systems? How do informal cities mutate, resist or perish? How can we deal with these new types of transformable architectures and uses?

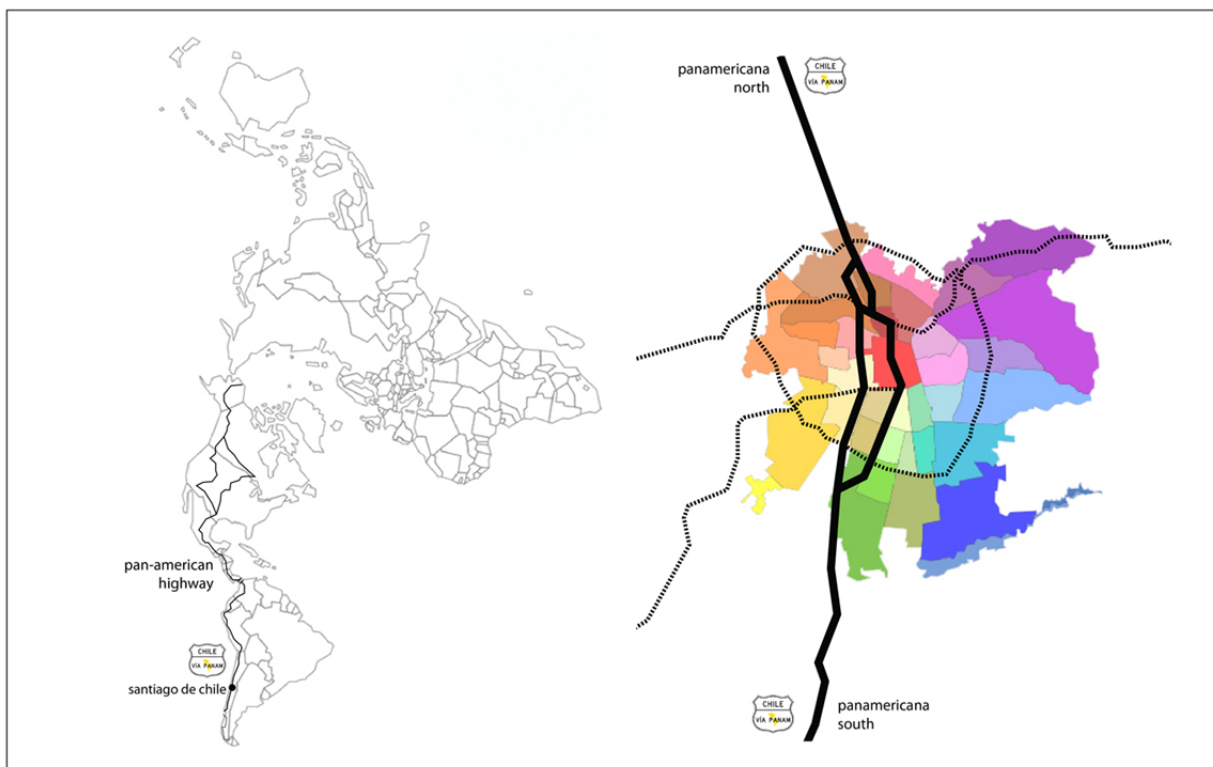


Figure 1. Unfolded mapamundi that reveals the global impact of Pan-American Highway and its titanic infrastructural network (left side) and map of the Pan-American Highway impacting the metropolitan area of Santiago and all districts (right side). Source: Suau, C. (2012) *The Pan-American Strip*, CERCLE Review 006, ISSN 2014-014

The scalability of the Pan-American Highway ensures that it experiences a checklist of urban and rural conditions along its route; and while there are a number of border cities that are along its path, the highway passes through thousands of kilometers of low and no-density areas, hinterlands, illicit urbanism, and devastated and untouched ecologies that can function as no-man's land or be a loose aggregation of informal settlements and economies. Official resources such as people, money, goods, and information travel along this corridor, but a network of unofficial resources exist here as well. Can these existing relationships be the beginning of a way of dense urban conditions and erasing the unfilled areas? Therefore, this study will identify and record significant programmatic and morphological informal structures, which define the urban features of any Pan-American city.

Such as Michel Laguerree (*The Informal City*, 1994) states that 'the existence of these informal practices is paradoxical in the sense that they make possible the smooth functioning of the formal urban system yet at times serve as a hindrance to the achievement of ethnic and gender equality'<sup>3</sup>. For instance, in the Central Valley of Chile mid-size cities are rapidly reshuffling and expanding their transport and communication networks by creating a *longitudinal urbanised band* whilst altering the existing agrarian landscape and hinterlands. These cities are large formal-informal-rural conurbations; spread and discontinuous; heterogeneous and socially multi-polarised. The main transport corridor - called *Panamericana* or *Ruta 5* in Chile- has a dual condition: Its physical edges constitute a formal urban passageway in the city centre whilst they become gradually defragmented and informalised towards the periphery, revealing the mutation and shifting of an 'Instant City' within the existing urban frame. However the economic stability and regulated urban planning is formalising these spots.

## Informal Urban Economies in the Americas

Urban form follows economic trends. According to Manuel Castell (1989), the phenomenon of Informal Economy constitutes 'a major structural feature of society both in industrialised and less develop countries. And yet, the ideological controversy and political debate surrounding its development have obscured comprehension of its character, challenging the capacity of the social science to provide a reliable analysis'<sup>4</sup>. Still there are not enough consistent observational urban studies that examine the dynamics of informality along infrastructural urban networks or, even more important, that traces its linkages with the formalised economy and its physical adaptation.

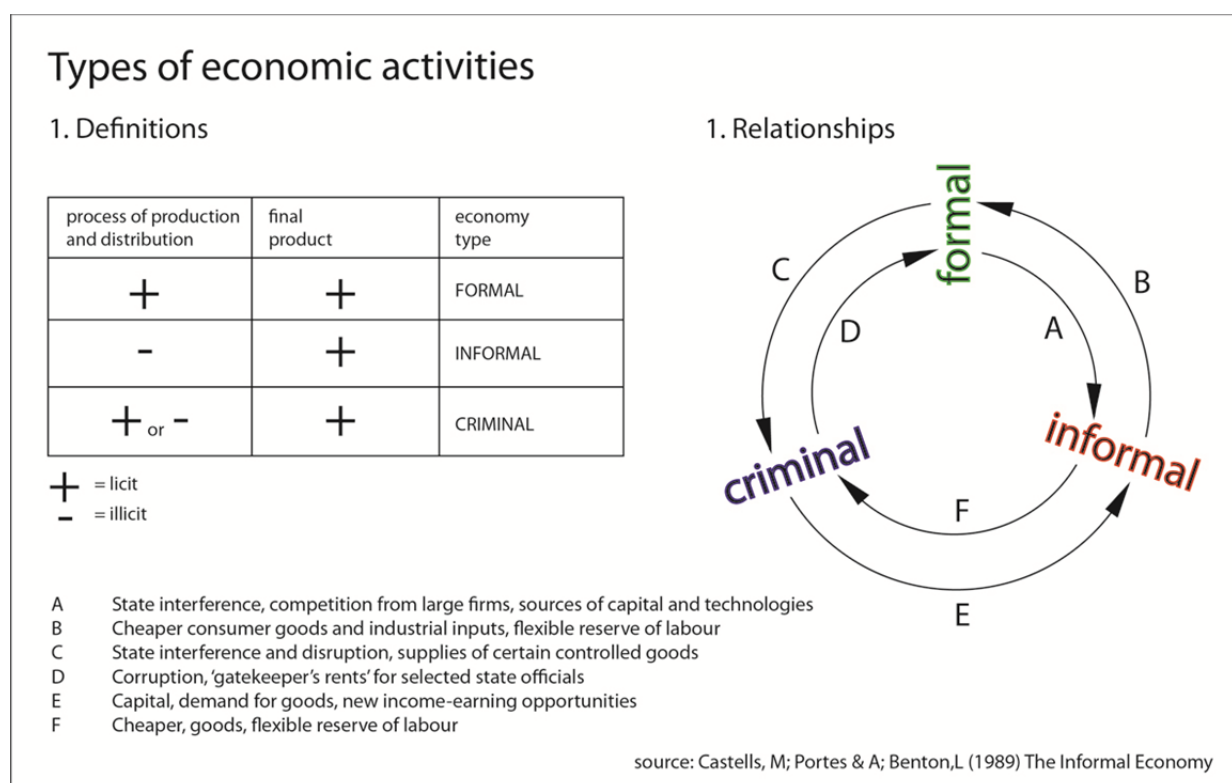


Figure 2. Type of economic activities. Source: Castells, M; Portes, A & Benton, L (1989): *The Informal Economy* (key diagram remade by Dr Suau, 2011)

The urban informal economies are characterised by small scale, evasion of formal regulations, flexible sites and family business but they differ in meaning and functions depending on the economical oscillations. In Latin America, the largest informal economy has Bolivia with 67.1%,

<sup>3</sup> Laguerree, Michel *The Informal City* (1994) London: MacMillan Press, pp. xi-xii

<sup>4</sup> Castells, M; Portes & A; Benton, L *The Informal Economy* (1989) London: The John Hopkins University Press, p1

followed by Panama with 64.1% and Peru with 59.9%. The lowest informal economy is Chile with 19.8%, similar to the OECD-West European countries' average. However if we compare the informal economy of South America and Africa we find out that is somewhat similar, 42% of informal economy, and higher than in Asia with a 26% of underground economy (Schneider, 2002)<sup>5</sup>.

In the case of Chile, Peru, Mexico (30.1% of shadow economy) and US (8.8% of shadow economy), the informal urban economy is still a viable development alternative to the formalised market. However, it is officially perceived as the anti-hero that undermines the growth of the formal economy. The reasons are that it competes with the formal commerce; avoid tax paying and is a terrain of criminality. Following Michel Laguerre's thoughts in the chapter '*The Informal Economy*' (*The Informal City*, 1994), he affirms that "*informality is seen in the interstice of the formal economy, either as an enclave or as an extension of the formal economy. Evidently, the way in which the informal is linked to the formal is linked to the formal is finely nuanced. The interstitial niche occupied by the informal within the boundaries of the formal economy help smooth the functioning of the formal economy. That informal function is produced by the formal for formal ends*"<sup>6</sup>.

In Texas (US), borderlands commerce can be highly categorised into informal or underground urban economies. By inspecting long-term study, observation, and participation in the border region of South Texas, book called '*The Informal and Underground Economy of the South Texas Border*' (Richardson, C. & Pisani, M., 2012) offers exceptional insights into the causes and effects of these economic channels. One of the keystones of the authors' findings is that these illicit economic activities increase when residents perceive the state's intervention in the impoverished *colonias* as illegitimate, whether in the form of fees, taxes, or regulation.

The formal and informal regions of the urban economy meet each other in different ways. The connections are intermittent, permanent, interstitial, central or peripheral depending on the distribution of low-income urban communities in cities like Arica and Tacna in South America or El Paso and Ciudad Juarez in North America.

## The '*Panamericana*' Strip: The Largest Instant Linear City on Earth!

Informal cities have always been characterized by a strong tension between what is vaguely described as their formal and informal magnitudes. Nevertheless, the terms formal and informal refer not only to the physical materialisation of unregulated economies but also to their entire socio-urban tissue. Informal cities and commerce exceed the structures of order, control and homogeneity that one supposes to find in a consolidated city; hence experts of the built environment - from a broad range of disciplines such as urban planning, sociology, ecology, cultural and urban studies and architecture- focus on alternative ways of analysis in order to study the phenomenon of urban informality.

According to Michel Laguerre (*The Informal City*, 1994), the manifestation of these unregulated spaces '*may not be under direct control of city government. It can either precede the establishment of formal space or be produced by formal space or the formal use of spaces*'<sup>7</sup>. Then he states that '*informal space is also a product of the formal use of the urban space. Because the formal space is unable to meet the expectations of every member of the city community, individuals feel it necessary to transform formal space into informal space to conduct their informal activities. Informal space develops in this instance within the formal spatial system. It is an outgrowth of that system*'. To him informalisation of urban space can also be seen in terms of supplies and demand.

If something can unquestionably characterise any emerging urban economy in Latin America is its every-day informal system of trade, which is outside state controlled or money-based

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<sup>5</sup> Schneider, F. *Size and Measurement of the Informal Economy in 110 Countries around the World* (July, 2002). The paper was presented at an Workshop of Australian National Tax Centre, ANU, Canberra, Australia, July 17, 2002 and financed by the 'Doing Business Project' of the World Bank: [http://www.amnet.co.il/attachments/informal\\_economy110.pdf](http://www.amnet.co.il/attachments/informal_economy110.pdf), accessed in 20/04/2010

<sup>6</sup> Laguerre, Michel (1994) *The Informal City*, London: MacMillan Press, pp 73.

<sup>7</sup> Laguerre, Michel (1994) *The Informal City*, London: MacMillan Press, pp 26.



transactions. It includes exchanges of goods and services, mutual self-help, unclassified jobs, street and highway vending, and others manifestations. However, what is the spatial impact of these informal activities in existing urban tissues? How front and back regions mutate along the main corridor? What types of spatial configurations generate in urban fabrics?

Reflecting on the geography of the informal space, the sociologist Erving Gottman (*Behaviour in Public Spaces*, 1963) framed out the theatrical performance that applies to *vis-à-vis* –formalised and informalised- interactions in cities<sup>8</sup>. The front area is the formalised place, the locus of the hegemonic cultural. The rear area represents a fringe space, which is the domain of informality. For instance, the main transport arteries in European consolidated cities –such as the main boulevards in Berlin, Paris or Madrid- are reinforced by a formalised active ‘*frontage*’ or commercial edges, which are directly facing the public realm. In the case of the Pan-American cities –formal or informal ones- we can identify an inversed situation. The frontage is fenced off, blinded. It is denied by mono-functional regulations that see the road infrastructure merely as a space of motorised traffic. Programmatic the result is the informalisation of the streetscape, a sort of ambiguous and residual spaces: a linear archipelago of ‘*terrain-vague*’ along main infrastructures.

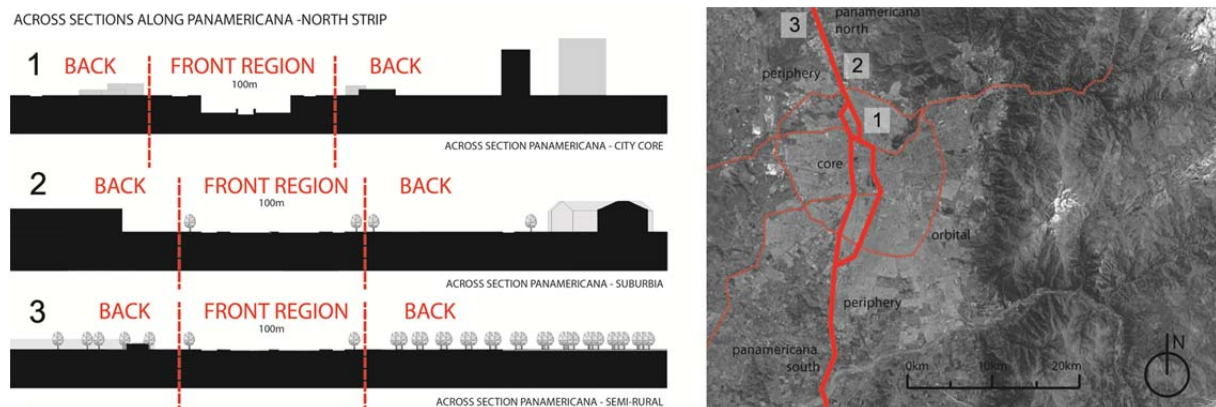


Figure 3. Key transversal sections of Panamericana strip in Santiago North: City core (1), suburbia (2) and rural zones (3). Source: Suau (2012).

For instance, the *Panamericana Highway* that crosses Santiago de Chile follows the urban principles of linear cities formulated by the Spanish planner Arturo Soria (1894)<sup>9</sup>. During the '60 the construction of *Panamericana Highway* in Santiago –a sunken communicational corridor- reinterprets and updates Soria's premises by inserting a subway line between roads instead. However, it split the existing urban core into new front and back regions. By comparing the Panamericana strip in Santiago with similar Latin American cities, it reveals that the informalisation of its public space is more subtle and gradient. In the city core it has a low degree of magnitude and visibility. However towards the periphery the edges suffer a rapid degradation of the formal frontage and any vacant gap is a territory for instant marketplaces characterised by fairs, scrapyards, sweatshops, etc. The case of the city of Arica (Chile) offers informality immediately outside the urban area which is also defined by the margins of the main highway. This informality is mainly industrial leftovers zones and immigrant shanty towns alongside the Azapa valley, the south east gate of Panamericana.

How can these regions interplay with each other again? The face-to-face interaction can also occur through other mechanisms of communications or soft infrastructure that Manuel Castells calls the ‘*space of flows*’. The informality performs like equilibrist ‘*swinging*’ on wires: the sideways of the highway. This type of ‘Instant Urbanism’ –either commerce or housing- constructs new urban patterns –transitory, elusive or spontaneous- which escape from any conventional spatial planning and are driven by the premises of continuity, diversity and hybridity defined by François Ascher (2004).

<sup>8</sup> Gottman, E. (1963) *Behaviour in Public Spaces*, New York: Free Press

<sup>9</sup> Arturo Soria believed in a tram-based city fed by a public transport network along an endless boulevard. This strip city consisted of a high-rise front and a low-rise residential back region.

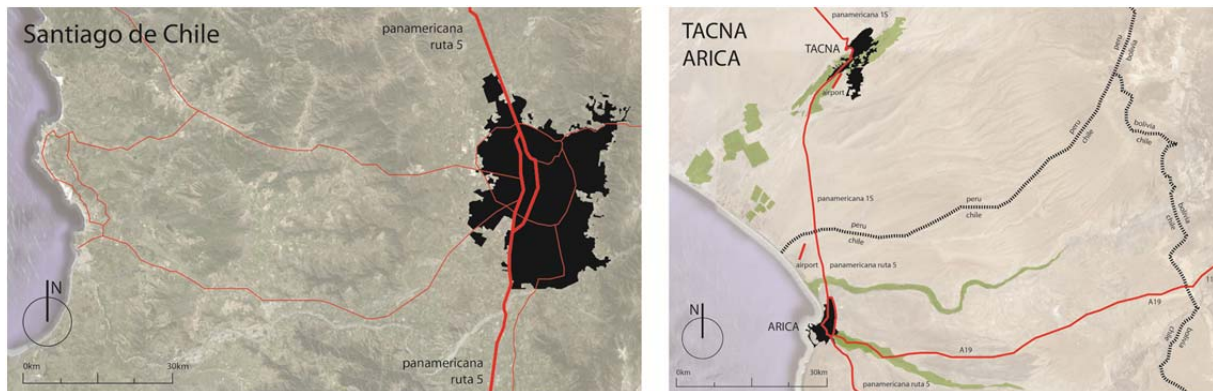


Figure 4. Comparative Satellite maps at similar scale of Great Santiago (Metropolitan Area) and the borderland of Arica-Tacna along the main transport network of Pan-American Highway. Source: Suau (2012).

## Informality in American Border Cities

Urban informality is materialised in distinctive forms of retail and housing configurations. Informal commerce, mainly categorised by fairs and street trading activities, is a common practice in the urban and suburban areas of many Latin American cities. For instance, in megacities like Santiago, this practice runs differently. Retail has been formalised in the city core whilst remains still strong in the impoverished suburban areas. But where is this informal commerce accommodated? Certainly this activity is attached to low-income social segments that are concentrated along the axis of the main transport corridor. The spatial dimension of informal commerce has a considerable expansion towards the North and, above all, South periphery of Santiago whilst informal housing is taking over the west areas along the Mapocho River.

Due to the recent privatization of some public roads through 'concessions', the metropolitan authorities are increasingly motivated towards '*branding*' an image of modernity whilst still neglect the reality of a crust of urban poverty along the strip of the Pan-American Highway. As result the public frontage has been transformed as a catalogue of billboard-factories and corporative buildings or simply fenced off. So the informal market has been shrunk and expelled and concentrated in less visible spaces backwards.

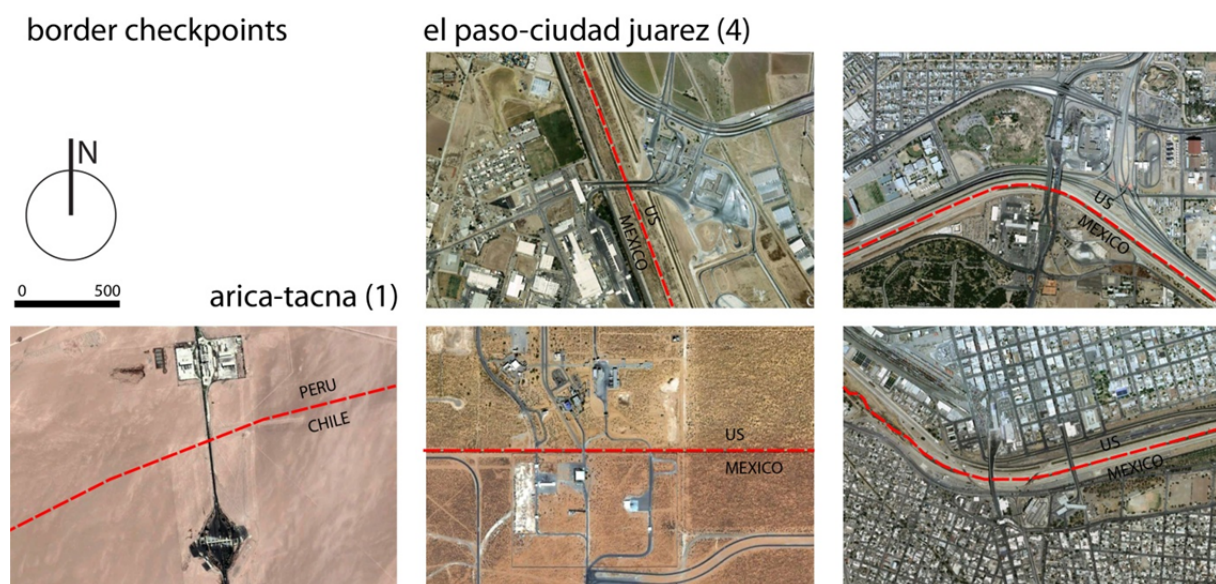


Figure 5. Comparative Satellite views at similar scale of the following border checkpoints along the main transport network of Pan-American Highway: The borderland of Arica-Tacna (1 gateway) and El Paso-Ciudad Juarez (4 gateways). Source: Dr Suau archive (2012).



Nonetheless how is this informality materialized in border cities? On one hand, the urban informality in the borderland of Arica (Chile) and Tacna (Peru) is mainly associated to housing and commerce. It is allocated in the gateways areas of each urban limit parallel to the highway strip. Even do this frontier is still highly militarised and subject of diplomatic ownership disputes, citizens of both countries can regularly migrate without additional control. It means that any physical expansion of each city towards the frontier should be driven by a major regional market and cooperation with Bolivia.

On another hand, the urban informality in the borderland of El Paso (US) and Ciudad Juárez (Mexico) is characterised by illicit retail which is trafficked immediately after the checkpoints of each border. The borderline of Rio Grande is one of the most militarised and controlled migration zones on earth. One example of informal commerce is the Fox Market, a temporary market situated in Washington Park, a triangular car park lot, 2 km away from the US gateway.

### Case Studies of Informality in Border Cities

What types of 'soft' spatial configurations generate in those urban fabrics? How might we deal with these new types of transformable intermediate spaces along the main infrastructural transport networks of the Pan-American Highway? In doing so, the study identifies distinctive informal spaces and typologies –either commerce or housing- in the following border conurbations: El Paso (US) – Ciudad Juárez (Mexico) and Tacna (Peru) – Arica (Chile). These informal spaces are categorised as macro-spaces (food fairs, flea markets, shanty towns, etc.) and micro-spaces (street vendors, push-carts, cardboard houses, etc.) of informality.

#### Borderland El Paso-Juárez

El Paso is located at 31°47'25"N 106°25'24"W. The city's elevation is 1140 m above sea level. It lies at the intersection of three states (Texas, New Mexico, and Chihuahua) and two countries (the USA and Mexico). El Paso is the nineteenth most populous city in the United States of America and the sixth most populous city in the state of Texas.



Figure 6. Aerial view of El Paso, facing Chihuahuita district and the main gateway to Ciudad Juárez. Source: Dr Suau archive (2012)

Its metropolitan area covers all of El Paso County, whose population in 2010 was 800647. The El Paso metropolitan area had a population of 736310. According to the United States Census Bureau (2006), the city has a total area of 648.9 km<sup>2</sup>. El Paso has historically been predominantly



Hispanic: 80% (75% are Mexican). The population density is 873.7 inhabitants per km<sup>2</sup> (census 2010). The per capita income for the city was US\$14388 and about 22.2% of the population were below the poverty line. Similarly to the border between San Diego and Tijuana, El Paso and Ciudad Juárez represents a situation of asymmetric patterns of urban informality –shanty versus conventional suburbia- which have shifted from the Mexican side towards the American side.

The Rio Grande River defines the border between El Paso from Ciudad Juárez to the south and west until the river turns north of the border with Mexico, separating El Paso from Doña Ana County, New Mexico. El Paso is surrounded by the Chihuahuan Desert, the easternmost section of the Basin and Range Region. El Paso stands on the Rio Grande (Río Bravo del Norte), across the border from Ciudad Juárez, Chihuahua, Mexico. The two cities form a combined international metropolitan area, sometimes called El Paso-Juárez, with Juárez being the significantly larger of the two in population. They have a combined population of two million, two-thirds of which reside in Juárez. El Paso and Ciudad Juárez comprise the second largest bi-national metropolitan area on the Mexico - United States border with a combined population of 2.1 million people.

Ciudad Juárez, formerly known as Paso del Norte<sup>10</sup>, is a large city in the Mexican state of Chihuahua. The city lies on the south riverside of Rio Grande: 31°44'22"N 106°29'13"W. Ciudad Juárez and El Paso are one of the 14 pairs of Cross-border town naming along the U.S.–Mexico border. There are 4 international ports of entry connecting Ciudad Juárez and El Paso, including the Bridge of the Americas, Ysleta International Bridge, Paso del Norte Bridge, and Stanton Street Bridge. For instance, all these gates allowed 22958472 crossings in 2008, making Ciudad Juárez a major point of entry and transportation for all of central northern Mexico.



Figure 7. Streetscape view of Ciudad Juárez. Source: Dr Suau archive (2012)

Ciudad Juárez has grown substantially in recent decades due to a large influx of people moving into the city in search of jobs more than 300 maquiladoras (assembly plants) located in and around the city. This rapid economic growth has originated slum housing communities called 'colonias', which have become extensive.

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<sup>10</sup> Ciudad Juárez was founded as *Paso del Norte* ("North Pass") in 1659 by Spanish explorers seeking a route through the southern Rocky Mountains. The 1848 Treaty of Guadalupe Hidalgo established the Rio Grande as the border between Mexico and the United States, separating the settlements on the north bank of the river from the rest of the town. Such settlements were not part of the town at that time; as the military set up its buildings the town grew around it. This would later become El Paso, Texas. From that time until mid-1930 populations on both sides of the border could move freely across it.

According to the 2010 demographic census, the city had 1321004 inhabitants. The average annual growth in population over a period (1990–2000) was 5.3%. During the last decades the city has received migrants from Mexico's interior, some figures state that 32% of the city's population originate outside the state of Chihuahua, mainly from the states of Durango (9.9%), Coahuila (6.3%), Veracruz (3.7%) and Zacatecas (3.5%), as well as from Mexico City (1.7%). Ciudad Juárez experienced much higher population growth than the state of Chihuahua and Mexico as a whole. It is one of the fastest growing cities in the world despite being called '*the most violent zone in the world outside of declared war zones*'. Local sources estimate that over 116000 houses have been abandoned (230000 people have left) due to the violence levels and about 10670 formal businesses –40% of the total– have shut.

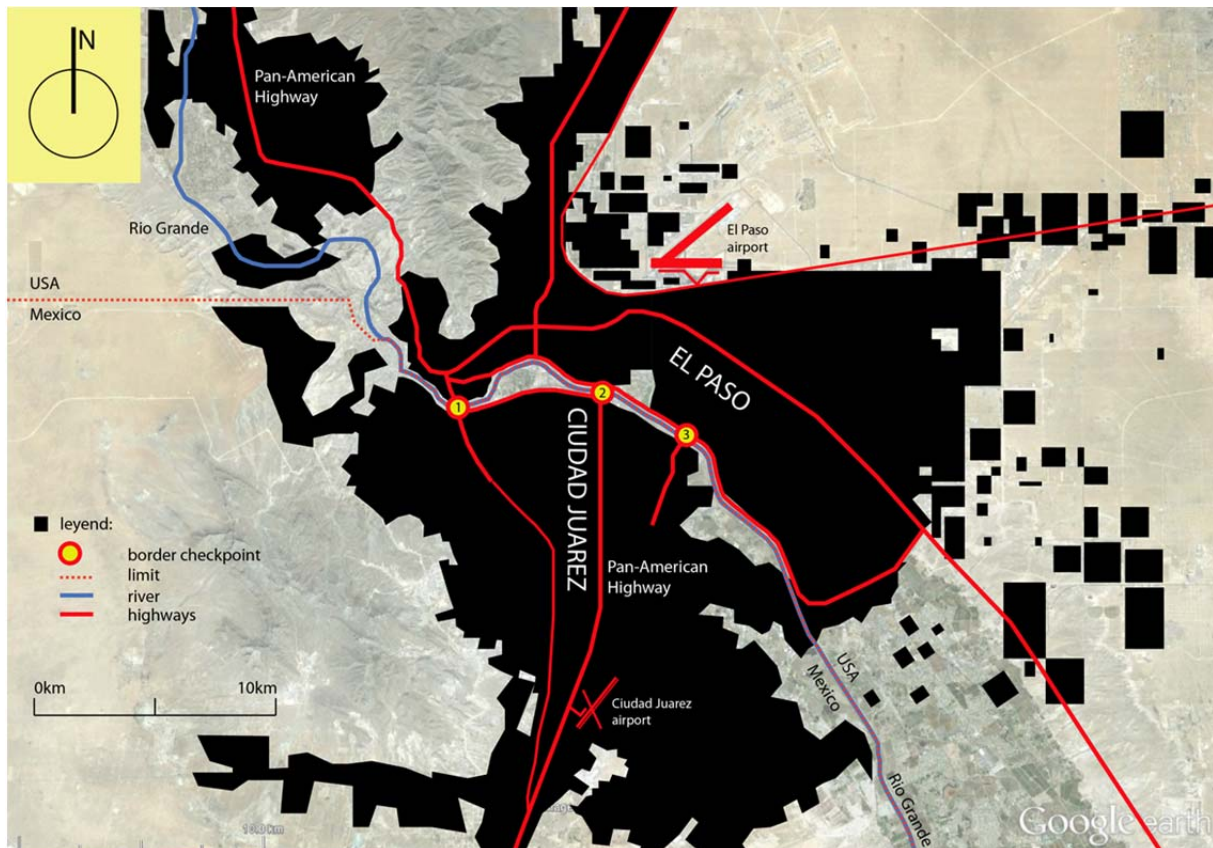


Figure 8. Conurbation of El Paso-Juárez along the main transport network of Pan-American Highway. Source: Suau (2012).

### Fox Flea Market: An Informal Retail in El Paso downtown

Informal commerce, mainly categorised by fairs and street trading activities, is a common practice in the urban and suburban areas of many Latin American cities. In El Paso (US) this practice runs differently. It has been banned in the city core whilst remains still strong in the impoverished suburban areas like Tejas, Chamizal or Segundo Barrio. So where is the informal commerce accommodated nowadays? As result, the informal market has been shrunk and expelled and concentrated in less visible spaces backwards.

Although informal trade remains visually displaced, the Fox' every-day activity constitutes a vivid expression of domestic economies which are excluded to co-participate in the formal sector. Regarding the informal commercial spaces, we can distinguish macro (flea markets or open-air food fairs) and micro retail spaces (street vendors and push-carts) situated in the city core; gateways and immigrant quarters of El Paso. The Fox Flea Market is well-known as a marketplace for local trade and gathering. Situated in a disused large car park lot, it offers a polyvalent usage allowing different manifestations of commercial activities weekly.





Figure 9. Fox Flea Market: An Informal Retail in El Paso downtown. The federal government has a strong presence in El Paso to manage its status and unique issues as a border region. The Immigration and Customs Enforcement (ICE), the Drug Enforcement Administration (DEA), and the Customs and Border Protection Agency (CBP) all have agency operations in El Paso to regulate traffic and goods through ports of entry from Mexico. Source: Dr Suau archive (2012)

The phenomenon of informal macro-commerce consists of domestic or *in-situ* trade, which resembles the public extension of dwellers' backyards. It is the *locus* where informal communal and economic interactions occur. Informal trade in marginalised areas of El Paso enhances the sense of every-day appropriation of vacant spaces. The adaptability of the street life has to do with the ability to support formal and informal activities and interactions beside functional standards of communication.

## Borderland Arica-Tacna

Arica is located at 18°29'S 70°20'W. It is a commune and a port city with a population of 185,269 people in the northern Chile, situated only 18 km south of the border with Peru. The city is the capital of both the Arica Province and the Arica and Parinacota Region.

The growing city of Arica spreads outward into the desert and the Peru-Chile border. The urban area of Arica has 185,441 inhabitants in an area of 41.89 km<sup>2</sup>. Arica in 2007 had more than 186,000 inhabitants (excluding the agro-settlements in the valleys of Lluta and Azapa). According to the 2012 census of the National Statistics Institute, Arica Province spans an area of 4,799.4 km<sup>2</sup> (1,853 sq mi) and has 213,595 inhabitants (104,961 men and 108,634 women). Of these, 95.7% lived in urban areas and 4.3% in rural areas (66,761 dwelling units). The population is a mixture between older-residing local Indians such as the Aymara with African people or Chinese who first arrived as miners and rail workers in the 1890s, and Europeans including the Spanish, Italians, British and French or their descendants who arrived at different times of local history. Some *Ariqueños* still have a kinship with the cultures of Peru and remotely Bolivia. Economically, it is an important port for Chilean minerals, tropical agricultural and as a tourist destination. It is also a centre of rail communication with Bolivia and Tacna (by separate railroad lines) and it has its own international airport. Arica has strong

connections with the city of Tacna, Peru; many people cross the border or '*Línea de la Concordia*'<sup>11</sup> daily to travel between the cities, partly because many services are inexpensive on the Peruvian side.

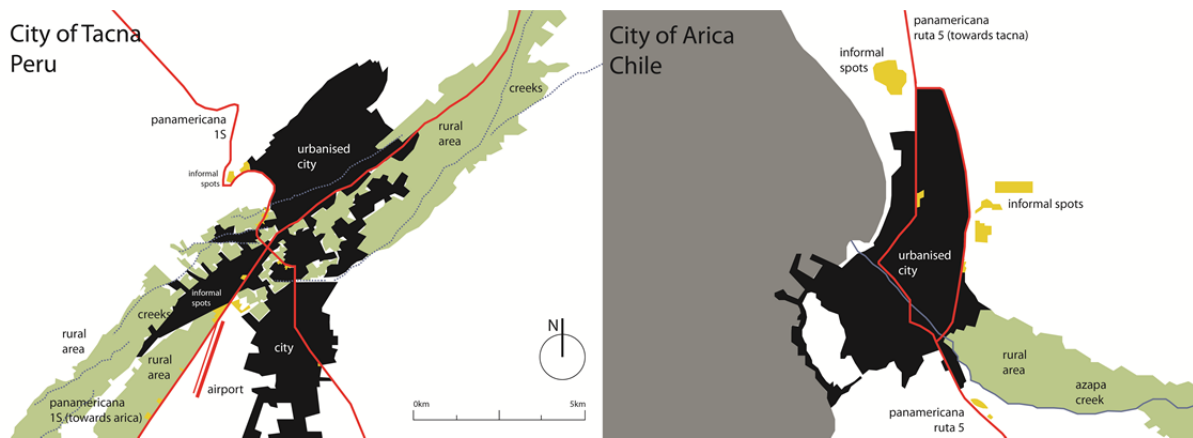


Figure 10. Comparative urban maps at similar scale of Tacna (left) and Arica (right) along the main transport network of Pan-American Highway. Source: Suau (2012).

Tacna is an inland city in southern Peru and the regional capital of the Tacna Region. It is located at 18°03'20"S 70°14'54"W, on the border with Chile (between the Pacific Ocean and in the valley of the Caplina River). It has a population of 242451 people. It is located only 35 km north of the border with Chile. Tacna is a very commercially active city with many immigrants from the Puno Region. Its economy is based on mercantile activities with the north of Chile (Arica and Iquique). Since it is part of a duty free zone, Tacna has come to rival Arequipa as southern Peru's main business area. The city has one of the largest artefact markets in the world with imports from Japan and China, and traditional Peruvian handicrafts.

Trade between the two cities is increasing due to they are fuelled by duty free zones, two airports, two railways and one port city. *The Panamericana* itself is the natural roadmap to convert, in the long term, the no-land man in a unified regional hub.

### Beyond "*Zona Urbana*": Informal Immigrant Settlement in Arica

This unauthorised urbanization is made in reclaimed cardboard and shipping boards supplied by agro-fairs. The settlement is situated just after the urban limit of Arica (East side), between the Azapa valley and the Pan-American Highway. Mostly Peruvian immigrants live in the so-called '*casas de carton*' (*cardboard houses*).

Being a no-man land, what is the spatiality of this slum and of its social articulation with the formal city? Since 2009 dwellers have constructed a group of one-storey housing units on a land to which the occupants have no legal claim. Similar difficulties occur in obtaining demographic data. They are often not covered by formal surveys, and many of the people living here may not be registered or officially recognized by the municipality. This slum also lacks of basic services, including medical and sanitary services and fire regulations.

We can visualize many processes by which dwellers might gain access to housing schemes, through the purchase and land management of affordable subdivided peri-urban (agricultural) land; densification of the existing settlement by adding floors and management of an adequate level of

<sup>11</sup> The '*Línea de la Concordia*' is the name given to the border between Chile and Peru, fixed by the Treaty of Lima of 1929, which established the return of part of the Province of Tacna to Peru and the permanence of the Province of Arica in Chile. The Chacalluta border checkpoint is located in the Chilean side and Santa Rosa border checkpoint is located next to the Peruvian side. Both border checkpoints are less than 1 km. This starts 10 km from the bridge over the Lluta river, continuing in parallel with 10 km of the route of the railway between Arica and La Paz.



public infrastructure (water, sanitation and power) and urban services (education, environmental health and civic amenities).



Figure 11. Beyond "Zona Urbana": Informal Immigrant Settlement in the outskirts of Arica. Top (clockwise array): Evolution of the squatter from 2003 to 2012. Bottom: Panoramic view of the 'campamento'. Source: Dr Suau archive (2012)

## Conclusions on Transformative Urban Edges

There are still many obstacles to be overcome to measure the shapes and size of the informality within instant urbanism and thus to analyse its consequences on the formal tissue. Informal shopping triggers '*Instant Urbanism*', especially along the main transport and communicational corridor. The informal system is seen as an adaptation of the formal one. Due to its non-rigid structure, its flexibility and fluidity allow it to move back and forth within the formal system and to dilute or occupy restless marginal positions.

The study of informalised urbanism along the Pan-American Highway in border cities has a high level of novelty due to it is not exclusively based on any reviews or synthesis of earlier publications on the subject of research. It nourishes the process of '*metapolisation*' and future planning of borderline urban territories. '*Instant Urbanism*' performs as mediating landscape between the main transport strip and the city, from core to the semi-rural periphery.

'*Instant Urbanism*' questions the prevailing notion of conventional urban planning and architecture, which call for temporary and transitional solutions and social empowerment in urban spaces. We need to rethink and redefine the Pan-American city by:

### A. Empowering temporary and playful informal architecture

How it is possible to redefine the city in alternative ways? The informality allows mobility, adaptability and transformability of the socio-economic networks. Marginal places can be converted into a locus for play and action.

## B. Transfiguring of every-day life

'Instant Urbanism' articulates the front and back regions of every-day urban life. It invigorates the city based on the simple premise that residents can decide the spaces they want to trade and live in.

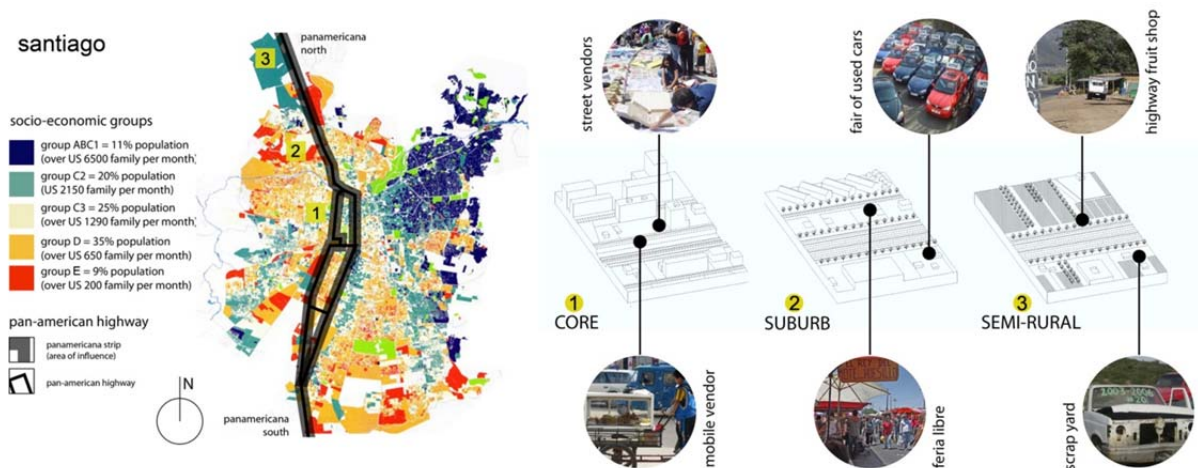


Figure 12. Sequence of existing informal macro/micro commerce along the Panamericana strip (North) in the core, suburban and semi-rural areas of Santiago de Chile. Source: Suau, C. (2012) *The Pan-American Strip*, CERCLE Review 006, ISSN 2014-014

The polyvalence of the urban informality of commerce and housing are characterised by the following premises:

1. *Elasticity*. It is used to maintain a 'soft' exchange process and can also be adapted to unexpected dislocations/insertions alongside the corridor.
2. *Latent or active*. Its performance either remains in a dormant state (intermittent activation) or active one when it is used regularly.
3. *Transformative*. It is resilient with a view to changing any aspect of formal social layer. It can initiate collaborative partnerships between community interests and the formal retail or real estate sectors, allowing for more inclusion.
4. *Subversive*. It provides a latent structure of resistance. Here the formal infrastructural layer creates substitutive informality in order to continue to operate smoothly. This 'safety-valve function' offers a place where informal traders plot out their strategies to destabilise or disrupt the formal infrastructural network.

## Author Biography

Dr. Cristian Suau holds a Ph.D. in Architecture and Master in Urban Design from Barcelona School of Architecture (ETSAB). He has an international teaching and postdoctoral research experience on Experimental Architectural Design; Theory of Contemporary Architecture and Sustainable Urban Design in Europe and Latin America. He also has an applied experience in housing and urban designs and environmental consultancies overseas. He was senior architect and project leader in the Office for Metropolitan Architecture (OMA) in Rotterdam. In addition, he has obtained several awards in design entry competitions such as EUROPAN. His current research mainly covers the following fields: Architecture, Cities and Polyvalence; Socio-cultural Analysis and Theory of Modern and Contemporary Architecture; and Sustainable Architecture and Water. Since mid-2007 he teaches Architectural Design at the Welsh School of Architecture (WSA) in Wales, UK. In addition, he lead a NGO called RECICLARQ in Barcelona: [www.reciclarq.org](http://www.reciclarq.org) and a sustainable design hub called ECOFRABRICA [www.ecofab.org](http://www.ecofab.org); a factory of environmental Eco-design, which utilises research-based design.

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